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President's Page

Since the last issue of our journal, your President has been fulfilling a number of speaking engagements in behalf of the Federation and a most pleasurable evening was spent in Boston, March 5, on the occasion of the 50th anniversary of the Guild of St. Luke. This group is certainly to be congratulated for its half century of existence, preceding by a number of years our national organization. Its accomplishments are great and it is our profound wish that the future will provide even greater progress.

We look now to events which will bring our Guilds together in New York during the week of June 25. The A.M.A. annual convention will be held at the Coliseum and the Federation will again be an exhibitor. Our space is C-26 and we urge our members to visit there and bring their friends. Staffing, too, is always necessary and any of our doctor-members who could give a few hours any of the days from the 25th through the 30th would be most welcome.

You have been advised of the full day of Federation activities scheduled for June 28. Our Memorial Mass for deceased members of the Federation and the A.M.A. will be offered at St. Patrick's Cathedral. Cardinal Spellman will be celebrant and our Moderator, Monsignor D. A. McGowan, will preach the sermon. We urge large participation in the Mass. We hope your families will join with you.

At 11:00 a.m. delegates from our Guilds will hold their annual Board meeting at the Commodore Hotel. This is a very important session and it is imperative that our affiliated member groups be represented. Each Guild is entitled to send one representative to the meeting and the name should be sent to our Executive Secretary, Miss Jean Read, at the central office in St. Louis, to include in the Roll Call. We will welcome our 100th Guild to the meeting. Catholic physicians of the Winona diocese in Minnesota, with headquarters in Rochester, have joined to make this total number of affiliated Guilds. We congratulate Dr. Clarence G. Ochsner, president, and his fellow-members on their formation and affiliation with the national organization. The Board meeting is very important. Our constituent members give voice to their ideas for the welfare of the Federation and its activities and only through representation at the session itself is this possible. We trust, therefore, that we can count on a large delegation.

The evening of June 28 will provide a gala social gathering which it is hoped will be as memorable as the Federation's 25th Jubilee celebration held in 1957. A reception at 6:30 p.m. followed by dinner at 8:00 p.m. will be held in the Grand Ballroom at the Commodore Hotel. Excellent cuisine will be complemented with the music of the Stanley Melba orchestra. The speaker of the evening, with a very special message for our medical profession, will be Congressman John E. Fogarty from Rhode Island, known to many as a friend of medical research and deeply interested in the work of the Department of Health, Education and Welfare. Dancing will follow the dinner. We look forward to meeting friends from all parts of the country on this occasion and know you will want to be present.

Please mark June 28 very specially on your calendar to participate in all of the National Federation activities to be held in New York City if you are planning to attend the A.M.A. annual convention. This day is set aside for all programs of organized groups thereby giving full time for full attendance with us. We look forward to meeting with you.

Eusebius J. Murphy, M.D.

SIR DOMINIC CORRIGAN: Healer of Hearts

EDWARD PODOLSKY, M.D. LITT.D.

We present another vignette in our series of Catholic Men of Medicine. Sir Dominic Corrigan made definite contribution in his studies of the actions of the heart and his story should be of interest to our readers.

T WAS NOT too long ago that physicians realized the contracting heart muscles made sounds, and that when one listened to those sounds he could learn a great deal about the condition of the heart. It was William Harvey who discovered the circulation of the blood, listened to the sounds that the heart made as it worked and believed that they might be of some value in eliciting vital information about the organ and its function.

There was also Dr. Robert Hooke, an original thinker who was far ahead of his time. Living more than a hundred years before René Laënnec, who invented the stethescope and made the listening to heart sounds less arduous, Dr. Hooke speculated with some degree of imagination on sounds of the internal organs and the meaning of them. He wrote:

There may also be a possibility of discovering the internal motions and actions of bodies by the sounds they make. Who knows but that, as in a watch, we may hear the beating of the balance, and the running of the wheels and the striking of the hammers and the grating of the teeth and multitudes of other noises; who knows, I say, but that it may be possible

to discover the motions of the internal parts of bodies, whether animal, vegetable, or mineral, by the sounds they make; that one may discover the works performed by the several offices and shops of man's body, and thereby discover what instrument or engine is out of order, what works are going on at certain times, and lie still at others, and the like.

I have been able to hear very plainly the beating of a man's heart, and it is common to hear the motion of the wind to and fro in the guts, and other small vessels; the stopping of the lungs is easily discovered by the wheezing, the heart by the humming and whistling noises, the slipping to and fro of the joints, in many cases by crackling, and the like . . . So to their becoming sensible they require either that motions be increased or that the organ be made more nice and powerful to sensate and distinguish them.

Somewhat later an event occurred that enabled Dr. René T. H. Laënnec to make an important discovery. One day crossing the courtyard of the Louvre, he saw some children listening at one end of a beam of wood to the sound made by striking a pin on the other end. He was inspired to try the same procedure when listening to the sounds of the chest.

He made the first crude stethescope entirely out of wood, but it magnified the heart sounds astonishingly, and he heard sounds that no doctor had heard before. For two years he went from patient to patient listening through the stethescope. At the end of that time he wrote a book on the subject and

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gave a very learned lecture before the Academy of Sciences.

Dr. Laënnec rapidly found disciples, bright young medical men who took up the new instrument with enthusiasm. There were several young English doctors who were firm believers in ausculation. Among them was Dr. William Stokes, who wrote quite an exhaustive book on the new medical art.

Dr. Stokes had graduated from Edinburgh in 1825. In the same class was another Irishman, Dominic John Corrigan, who was destined to play an important role in learning to understand the language of the heart. Dr. Corrigan settled in his native Dublin and busied himself with dispensary work. But he was mostly interested in the heart especially in the information that the heart sounds convey.

Within five years Dr. Corrigan had learned a sufficient number of facts to write a paper entitled "On the Motions and Sounds of the Heart," which was published in 1830. From then on he began to devote most of his time to studies on the valves of the heart. He learned to know what these different sounds meant and what type of valve deformity they represented.

The modern doctor is thoroughly acquainted with heart sounds. When he places his stethescope over the heart, he hears a variety of sounds and he knows just what each sound means. In the normal heart he hears two sounds re-

sembling "lub-dub;" that is, the first sound is similar to "lub" and the second emits a "dub." The first sound is due to the contraction of the power parts of the heart. The second is due to the slap produced when the aortic and pulmonic valves close.

When these sounds are replaced with murmurs, the examining doctor begins to suspect that the heart is not as it should be. A murmur means just that. Instead of a clear, snappy sound, the doctor hears a murmuring sound. There may be a normal first sound and a murmuring second one; a murmuring first and a normal second sound, or both may be replaced by murmurs.

Physicians know that murmurs are produced by a variety of conditions, which, for the most part, are related to the heart valves. Thus, murmurs are produced when the valves are too stiff and short to close, when the valves fail to close at the proper time, when the surfaces of the valves are roughened so as to prevent the smooth flow of blood over them, or when the orifices which the valves are meant to close are dilated as a result of dilatation of the heart chamber of which they form the entrance or exit. The presence of any of these conditions gives rise to eddies in the blood current, and these are directly responsible for the murmur that the doctor hears.

The full significance of these various murmurs was established by Dr. Corrigan. His account of aortic incompetence was entirely original, full of careful clinical ob-

servation and thought. He gave a systematic account based on eleven cases, and he was rather optimistic in his opinion that such patients are not likely to die suddenly. He advocated the use of digitalis, blood-letting and other depletory measures as indicated in the treatment of this heart condition. Much thought was devoted to diseases of the valves and how they could be diagnosed and treated. He discussed stenosis of the valves of the aorta which gave a slow pulse and found that when the valves failed to come together properly the pulse was "invariably full and swelling."

Concerning treatment for diseases of the valves of the aorta, Dr. Corrigan said:

A little reflection on the nature of the disease before us will show that these principles (general and local bleedings, restricted diet, and digitalis) are inapplicable both to the treatment of the valvular alterations, and of the hypertropy of the left ventricle which accompanies that alteration. The physical condition requires hypertrophy and so we need strengthening of the general constitution, which will give proportional vigor to the heart. Hence, there should be general and sufficient diet of animal and vegetable food, and at the same time abstinence from those beverages, such as malt liquors, which increase the mass of the fluids. The patient may attend to business or profession, but should avoid so much attention as to produce debility.

. . . And as there is among patients who have learned that they are afflicted with heart disease a universal dread of sudden death, it is necessary to undeceive them on this point; and in the present instance it can be done with perfect safety, as the termination of the disease is never sudden.

History tells us that Dominic John Corrigan was born December 1, 1802 in Dublin. The son of a poor shopkeeper, his early education was obtained at Maynooth, which then had a department for secular students apart from the ecclesiastical seminary. He was attracted to the study of medicine by the physician in attendance. After several years of medical study in Dublin, he followed the prevailing custom of the time and went to Edinburgh where he received his M.D. degree in 1825.

After his return to Dublin, he was appointed physician to the Iervix Street Hospital, which had but six medical beds. During the next four years he studied certain forms of heart disease to such good purpose that he recast the teaching of diseases of the aortic valves. His article on "Permanent Patency of the Aortic Valves" appeared in the Edinburgh Medical and Surgical Journal for April, 1832. He was eminently successful as a teacher of medicine. In 1842, the London College of Surgeons conferred on him its diploma. In 1849 he received from the University of Dublin the honorary degree of M.D. In 1866 he was made a baronet and was appointed Physician-to-the-Queen in Ireland.

He was known as a very hard-working physician, and his self-sacrificing devotion during the famine-fever years made him famous. His "Lectures on Fevers" (Dublin, 1853) are a valuable contribution to our knowledge of this subject. He was created a baronet partly as a reward for his services as Commissioner of Education for many years. Dr. Corrigan was a member of Parliament in the Liberal interest for five years

after 1869. He was defeated for re-election in 1874, by the liquor interest which he had antagonized by supporting the Sunday Closing Bill. He was President of the Royal Zoological Society of Dublin, of the Dublin Pharmaceutical Society, and was five times elected President of the College of Physicians in Dublin, an unprecedented honour. His work on heart disease denotes him as a great original investigator in medicine. Trousseau, the French clinician, proposed that aortic heart disease be called Corrigan's disease.

Although Dr. Corrigan was concerned with all phases of medicine, it was with diseases of the heart that he was most concerned. His special attention was directed to the aorta, the largest artery of the body, as well as the heart.

Diseases of the valves of the heart were associated with a variety of structural changes, Dr. Corrigan pointed out. This he recognized in cases in which "the valves may be tightened or curled against the sides of the aorta," cases in which the "valves without any proper lesion may be rendered inadequate to their function by the dilatation of the mouth of the aorta," and others in which "one or more of the valves may be ruptured."

The visible pulsation of the arteries of the head and arms and the murmur synchronous with the collapse of the arteries in the neck were graphically described by Dr. Corrigan. "In these cases in which the deficiency of the valves is considerable, allowing a full

stream of blood to rush back into the ventricle, there is heard in the ascending aorta a double bruit . . . and in listening to the two sounds constituting this double bruit de soufflet, the impression made distinctly on the ear is that the first sound is from a rushing of blood up the aorta, the second from a rushing back into the ventricle. It is impossible to conceive the distinctness with which the impression described is made on the ear." Said Dr. Corrigan: "The heart in all cases that this occurred was enormously enlarged and its bulk arose from the state of the left ventricle."

Dr. Corrigan was the first to recognize the true significance of enlargement of the heart. such circumstances, nature. enable the heart to perform the additional labor thrown on it. increases its strength by the addition of muscular fiber, and the heart thus becomes hypertrophied, in accordance with the general law that muscular fiber becomes thickened and strengthened when there is additional power required from it. Is this hypertrophy disease, or is it a wise provision of nature, by which the organ is thus made equal to the increased labor it has to perform? On the answer depends the treatment to be adopted, and on this there is no room for hesitation. A heart of ordinary strength could not, under the circumstances, carry on the circulation; and nature then wisely endows the heart with the requisite degree of strength. It is at once obvious that to interfere with this wise provision of nature. to diminish the strength of the heart, or, if we choose other words, to direct, according to the advice of Laënnec, Bertin, etc., our measures against the hypertrophy of the organ, to deprive the system of the only power which enables the heart to carry on the circulation . . . the repeated bleedings, the starvings, the enforcement of debilitating measures are totally unsuited to the disease we are considering."

Sir Dominic John Corrigan was one of the great students of the heart. It was he who gave us among the first clear insights into the deformities of the valves of the heart, how they could be detected and how they should be treated. He also told us why the heart behaves the way it does in health and disease and how it should be managed properly. His name is immortalized in medical literature as the first to describe the Corrigan pulse, a condition caused by an alteration in the valves of the aorta. He was one of the great heart healers.

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FEDERATION EXECUTIVE BOARD MEETING SCHEDULED

The Executive Board of the National Federation of Catholic Physicians' Guilds will hold its annual meeting June 28, 1961. Time: 11:00 a.m. Place: Hotel Commodore, New York City.

The Officers of the national organization and one delegate from each active constituent Guild comprising the Board will conduct business.

If Only She Were a Little Younger

The Impact of Aging on Religious Communities for Women

CON J. FECHER, Ph.D. AND JAMES T. NIX, M.D., Ph.D.

RECENT comprehensive health survey¹ of 90,000 members of religious communities for women has shown that from 1905 to 1950:

- 1. The average age of sister population has increased from 37.6 years to 45.3 years.
- 2. The percentage of sisters 45 years of age and older has increased from 27.4% to 51%.
- 3. The percentage of sisters over 60 years of age has increased from 7.7% to 21.6%.
- 4. The percentage of sisters between 17 years and 29 years has decreased from 31.9% to 18.4%.

Medical advances have reduced deaths from acute infectious diseases among female religious in the past half century; the decreased chance of dying from infectious disease has inevitably resulted in a changing age pattern of sisters and an increased chance of dying from a chronic disease. At present, the average number of years of life remaining for a sister at age 60 is approximately

As golden age may prove to be a liability rather than an asset, this study attempts to anticipate the effect of aging on the administrative, economic and medical life of religious communities for women. The ever increasing longevity of female religious will severely dislocate the operation of many religious communities for women. However, the intensity of impact of aging on any individual community will be directly proportionate to the percentage of sister members over 65 years of age. We anticipate that 5% of the sisters between the ages of 65 and 74 years will be completely inactive, and that 20% of the sisters 75 years of age or older will be completely inactive. In all probability,

²⁰ more. It is believed that this trend to longevity will continue, and that by 1975, one-third of the members of religious communities for women will be over 60 years of age. The decreased percentage of sisters in the younger groups probably reflects both decreased vocations and increased longevity of community members. It is believed, however, that in the last five years the numbers have increased 16% and it is hoped that they will continue to increase as the population bulge now comes into the high school age bracket.

¹ Fecher, Con J., Ph.D.: "Mortality and Morbidity Studies of Religious," THE LINACRE QUARTERLY, November, 1960.

sisters 65 years of age and older will have three times the number of days per person, per year, of disabling illness with restricted activity, as the sisters in the 15 to 44 years of age group.

As the rate of increase of the sister population has not kept pace with the expansion in Catholic schools and hospital services, and as older nuns are limited both in work load and manual activity. community productivity is expected to decline. Furthermore, more community infirmarians will be required to care for the disabled members of the community. In addition to decreased productivity, the community must be prepared to assume increased expenditures for drugs, infirmary care, and hospitalization. At present, most religious communities for women spend an average of \$5.00 a month for medication per sister, and have 3% of their members permanently confined to the community infirmary. The cost of drugs and infirmary care is expected to rise, and the infirmary population is expected to expand as the sisters enter the coronary, diabetic, and geriatric age group. In addition, adequate hospitalization coverage for any individual sister teaching in the parochial schools would consume 10% of the remuneration the community receives for her services: in most areas of the United States the income from six fulltime, full-duty parochial school sisters is needed to finance one sister in a mental institution, and the income from twelve full-time, fullduty parochial school sisters is required to finance one sister in a

general hospital.

Community physicians throughout the country have recently noticed an increase in chronic and degenerative diseases in our sister population, that is, coronary artery disease, cancer, senility, diabetes, and ruptured disc, etc. As chronic medical diseases are commonly handled in the community infirmary, the ever recurring need for additional infirmary beds is envisioned. Furthermore, analysis of the admissions of female religious to general hospitals shows a disproportionately large number of surgical cases and a rising volume of breast and gynecological surgery.

The impact of age may be blunted by the joint efforts of the Mother Provincial, Catholic physician, Catholic psychiatrist, and Catholic hospital. The institution of ameliorating measures depends upon appraisal of the problem through a continuous morbidity and mortality study. Only a nationwide health program for religious will make it possible to estimate future medical, surgical, hospital, and other needs of the aged. Such a program² has been outlined by the Committee on Medical Care of Clergy and Religious of the National Federation of Catholic Physicians' Guilds and The Catholic Hospital Association. This program embraces a Standard Health Record System, including an Entrance Physical Examination Form, a Medical

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² Nix, J. T., M.D., Ph.D.: "Health Care of Clergy and Religious," THE LINACRE QUARTERLY, August, 1960.

Identification Card, and a Communication Sheet for transmission to the Mother Provincial. This program, if accepted by the communities and executed by trained community physicians and infirmarians, will show distribution of trends of morbidity essential to evaluate the health needs of all communities. United action will make possible estimates of the recruitment and replacement needs of religious bodies and provide facilities for sick and disabled sisters of all communities. Accurate and complete medical records will result in prompt diagnosis and provide data for standards of admissions, clarifying the mandates of Canon Law, and satisfying the requirements of community rule and the specific needs of missionary and contemplative religious life.

The combined efforts of clergy, religious, and laity alike are needed if aging sisters are to achieve their full work potential. This is emphasized by the results of several surveys on current health practices among female religious that lead us to believe:

Health education, health counselling, periodic health examination, and health records are non-existent or inadequate.

Psychological screening as part of the preadmission examination is the exception rather than the rule.

Overwork is the rule rather than the exception, and in many communities retreats and attendance at conventions are synonymous with vacation.

Half of the community infirmarians have no nursing training.

Two-thirds of religious communities have no hospital insurance.

The Catholic Hospital Association could train infirmarians in the mechanics of the health record system, standard emergency routines, and in the treatment of accidental injuries. Dietitians, trained under similar auspices, could reduce the absentee rate among their sisters at the individual stations by preventing avitaminosis, obesity, and food poisoning. Consideration should be given to relaxation of some of the community rules conflicting with the accepted management of diabetic and duodenal ulcer patients.

While the relationship of diet and obesity to longevity should be the subject of continuing research, more immediate benefit would follow instruction of all sisters, and particularly the elderly religious with lowered cardiac reserve, in the dangers of obesity. special privileges regarding the community habit might decrease the morbidity rate among old sisters with cardiac disorders, who are unable to tolerate excessive heat. The design of new community buildings should consider the limited physical reserve of our aging sisters, as well as the customs of the community.

The Guild of Catholic Psychiatrists could provide a program of psychiatric screening and psychiatric evaluation to eliminate the poor risk postulant. In the past, because of time, expense, and embarrassment involved, the psychiatrist has been consulted infrequently and as a last resort. The morbidity of tension could be lessened by minimizing anxiety resultant from overwork, inadequate educational preparation, the pressure of certification, and too frequent change of station. Control of self-medication would result in the lowering of morbidity and mortality of all sisters.

Insufficient financial resources and inadequate staffs have resulted in overwork. No person, even if religiously motivated, is able to work a 16-hour day. 7 days a week ad infinitum. Particularly in the aged, overwork is false and fatal economy. Unfortunately, in the past overwork has been the rule rather than the exception, and vacations and days off have been the exception rather than the rule. Retreats and attendance at conventions should not synonymous with vacation. Older sisters need recreation, in fact as well as in name, and at least one week vacation yearly in addition to retreat. Seven hours continuous sleep in each 24-hour period should be mandatory and not subject to desires or work load. Many disabled members of the community could be salvaged for limited yet productive service by intensive rehabilitation and occupational therapy. Although we realize that the sisters labor for God, Church, and community, many sisters teaching in the parochial schools are unable to afford this or any other health program, much less the cost of hospitalization on their current stipends.

Finally, as community personnel can reasonably expect an increased length of life, prolonged training in the novitiate of sister specialists could provide a more productive life for the sister and community alike. As the value of sister specialists of the community increases with age and experience. and as their contributions would be mental rather than manual, they would be physically able to be productive members in supervisory assignments far into the golden age. The changing age pattern of nuns will demand increased productivity to compensate for a shortened work week. Many provincials are already exploring the possibility of late vocations, labor saving devices, and lay personnel. Delegation to the laity and dedication to efficiency may well be the order of the day. The provincial should evaluate future committments in the light of these new social, economic, educational and health problems. Old age cannot be prevented, but it can be deferred. Sisters may be chronologically old, yet productive, if spiritually and physiologically young.

May, 1961 63

MEDICINE: Science, Profession, Vocation*

Fred M. Taylor, M.D. Houston, Texas

EDICINE as a science is an intellectual adventure that explores ails of the human body and mind; as a profession it is a learned occupation dispensing relief and comfort; and as a vocation a humanistic summons to give oneself to God and service of man. Thus, doctors of medicine pursue knowledge of man as a whole being, assist him in health and disease, and exercise an art evolved in moral and spiritual laws.

SAFEGUARD OF LIFE

Safeguard of the living is a moral responsibility, a fundamental ethical fact neither oversimplifying nor overassessing medicine as a means of magnificent good. For medicine has within its grasp the power to bring relief and help to countless persons in need. But medicine faces challenges - not merely the bumbling challenges of recurrent cynics that spread distrust and nihilism amongst those upholding the idealistic aims of medicine, but hard-rooted alien challenges that threaten it with loss of its divine heritage and its aesthetic content; and that subvert physicians with loss not of their corporate strength but of the truth and beauty of their vocation. and even the courage of fulfillment of vocation.

* Adapted from a lecture given March 16, 1961, to premedical students at the

Medicine, it is said satirically, faces a future that will have fewer and fewer physicians, for the technologic advances and electronic computers of medical automation. together with corner drug-stores doling out, on prescription, the means of control of human genes. would serve to make the medical profession itself obsolete. And too, given enough time and adequate money (through one of the innumerable money-drives for each body system and every body disease, as well as for the prevention and taking of human life) all problems concerned with the safeguard of life would, of course, be prevented and thus become nonexistent. It also is said, however. that the practice of medicine not only is too arduous, but is financially unprofitable and beset with untold regulations. Yes - arduous it is; for medicine is not only a painstaking science and profession, but a demanding vocation in service to humanity.

ONE ERA TO THE NEXT

Two thousand years ago the mean life span of human beings was approximately 18 years, in-

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creasing during the middle ages in England - without advantage of chemotherapy and modern sewage disposal - to 33 years, and in 1900 to 49 years. Human beings at the present time have an average life span of 70 to 75 years. But threats to health are inescapable. And burdens of disease don't change. Merely the kind of disease changes: from the black plague and syphilis to tuberculosis and smallpox, and now again to syphilis; and from disorders of lack to disorders of excess; together with innumerable homotypic strains of virus, degenerative diseases, cancer, accidents. and mental-social handicaps. Thus, from one era to the next, medical practice and therapeutic methods undergo transformation. Obviously the kind of infectious disease changes, whether associated or not with the startling achievements in antibiotics against pneumonia and brain infection, in immunization against diphtheria and poliomyein sanitary engineering against typhoid fever and dysentery, and in public health measures against prevalence of malaria and tuberculosis.

Moreover, mortality rate is not criteria of absence of health. For physical and social disorders of extraordinary handicap continue to increase significantly. As examples, what's the health status of a 15-year-old who steals to buy heroin? Of a 3-year-old boy with progressive decompensation of lung function? Of young persons recurrently absent from school? Of adults and parents chronically and recurringly miserable with

fear and suspicion of illness? Or of 14-year-old boys who want not sex education but advice on "How can we avoid getting V. D."?

Whether disease be physical and social, or social and mental. as well as mental and spiritual; and whether human beings be sick or well, young or elderly, needy or not, the kind of doctor of medicine devoted to the unarquable principle of love of man and unweary concern for life will be necessary. For as long as human beings exist, whether on this earth or outside it, regardless of continuous increase in knowledge of genetics and molecular chemistry. medicine will be practiced. For medicine is catholic. With neither boundary nor limitation its primary aim is always to provide the greatest number of human beings with the best possible medical care.

PHYSICIAN AND SOCIETY

We in medicine are in part shaped by the society in which we live and particularly the unfortunate consequences of its materialistic schism. And we, as well as laymen, are capable of excessive preoccupation with material welfare and personal distinction, and — wittingly or unwittingly — of defection to a kind of security bloc that not only lacks purpose and zest but even respect for human beings and indeed life itself.

Medicine as a profession is not likely servile. Nor is it inclined to go along with any herd. Yet, as a profession it is inseparably intertwined with the changing forces of complex social, economi-

cal and cultural problems. And intertwine it should. For a physician's individual security in medicine bears directly not on the snug security of the well-being of his own professional herd, but on the infallible security of service to mankind.

We physicians comprise a unified professional culture, but there are intraprofessional group differences. We comprise a learned occupation, but there are mutual incomprehensions and naive dialogs. For we are human beings: some of us might even be cads and shrews, but the majority are dedicated servants. Some act and speak irresponsibly, but most are fully aware that optimum performance requires optimum responsibility. Some are shrewd business men, but innumerable physicians put aside all consideration of personal advantage or disadvantage. Nevertheless, as physicians comprising a vocation, each of us is obligated to stand above the common herd at least in this respect: to practice not a trade but an art.

KIND OF PHYSICIAN

Every generation has its ideal physician and its special brand of medicine: from the beloved doctor with the black satchel stuffed with pills and hypodermics to the futuristic-like doctor-scientist with an awsomely equipped laboratory of electronic-minded instruments. Yet either example, regardless of generation and exigencies of society, is obligated by oath upon becoming doctor of medicine to relieve and comfort, and have reverence for the superior good of

human life.

The physician heals wounds and relieves distress, and like the priest penetrates secrets, shares sorrows, comforts the dying and eases the bereaved. All these things he does with an attitude of dedication and persistence, and of conviction and enthusiasm with the authority of an expert, the austerity of a monk, the masterly daring of an astronaut, and the versatility of a university president. But whatever kind of doctor of medicine, his devotion and interest serve to make his hours the longest. And however long his hours - without regard for 40 and 50 hour weeks - his financial income may be the smallest or the largest. And however varied his professional interests, as well as individual personality and capability, the doctor is the person entrusted with the confidence of a child, and the hope of the aged.

And wherever we go there are physicians: from the family physician — traditionally a generous, kind, sensitive person, an allaround doctor who is apt to be regarded as the very foundation of medicine itself — to an Esquire avenue-like doctor, a stiff, sophisticated, cool character, the merchant of medicine, one not likely to be medicine's choice as doctor of the year.

There are physicians who are administrative directors of large or small hospitals. Others serve medical corps of the federal services. Some direct vast medical programs of insurance companies, or specialize in industrial medicine.

There are those who organize primitive human beings into corps of disciplined nurse-aides in a medical mission in the Caribbean. Some are responsible for the complex health programs of cities and counties that protect the health of a community. Others choose to teach on faculties of medical schools. And still others are editors of reputable medical journals.

There are physicians who practice alone or together, in groups or in clinics. They may specialize in medical and surgical disorders of various body-systems. Some repair defects of the heart not only heretofore unheard of but also never before thought possible. There are those expert in disorders of the mind: of the bones: of the lungs; of the kidneys; and so on. Some are authorities by knowledge and experience in genetics and enzymology. Some become expert in the current "know-how" of both atomic submarine medicine and space medicine (some might even be honored as physicians to Sam, The Rocket Man). Others bend their energies and intellects in the laboratories in search of measures to prevent and cure arthritis, kidnev disease, cancer and leukemia. Some assist the delivery of babies; others limit their whole medical practice to the care of aged persons.

MEDICINE NEEDS THE BEST

Standards of medicine are as high as the degree of knowledge and morality allows. Therefore, the profession of medicine, like the priesthood, needs persons with the best mental ability, the best physi-

cal stability, and the best emotional fitness. A person with intellectual capability thus is a candidate for medicine. But it happens this is a characteristic also sought by deans of other professional schools, as well as by corporations and industry recruiting aggressively and effectively in this regard. A candidate for medicine. however, needs more than intellectual capability. Thus his selection, as well as education, is a difficult but important task. For mere intellectual and technical competence is not enough. A candidate for medicine must be sensitive to human beings, and even like them. And he should be capable of knowing as they know, living as they live, thinking as they think, worrying as they worry, and understanding as they understand.

Medicine is humanism in an ever-changing time and environment, and those who practice it with full heart must also understand man in his economic perspective and social evolution. For physicians serve mankind. Thus there is need in medicine for persons not with poverty of mind and fixed intolerance, but with keenness of comprehension and richness of understanding. Medicine needs the best: persons liberally minded and educated, and capable of highest standards of medical practice and greatest humanistic concern.

But it is true that a physician also learns to learn for himself, and to have respect for learning, as well as for ignorance and fear.

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He learns to grow in understanding of the social responsibilities expected of a professional person, and to develop both knowledge and a consciousness of man's traditions, ideals and cultures, as well as his creativity and way of life. He tries to acquire early a power of critical thinking and reasoning—not the cynical brand of thinking that creates clamor and discord, or conveys a falsehood and exaggeration, but the kind that submits to a standard of evidence and truth-telling.

For in his role in human affairs a physician is called upon to handle adequately and satisfactorily innumerable problems not only of health and disease but also of community and profession. However competent his learning and thinking, or whatever caliber his medical and research ability, a physician sooner or later is appraised for his qualities of charity, of love of man, and of stout honesty. And to masquerade with a professionalscientific halo either as sociologist and politician, or as economic and medical expert, and pretend to know and solve problems of social and criminal delinquency, or of adequate care of the young and old - yet not know whereof he speaks - culpably degrades very aim of medicine itself. Yet as scientist, physician, and humanist he is obligated to know whereof he speaks, for even in conscience he has a moral obligation to society and his profession.

The science of medicine grows more difficult and complex with time. Yet it is not unfashionable

for the profession of medicine to stress the need for attitudes of critical inquiry, together with attitudes of conviction, enthusiasm and proper compromise: conviction for a moral and ethical point of view with emphasis not on material benefit but on spiritual benefit, not on material value but on humanistic value: enthusiasm for service not to physicians primarily but to individual patients, and for the deployment not of fragile talk but of what is good; not of organized mediocrity but organized quality; not of clumsy uncertainty and mistrust but thoughful reflection, and compromise of thinking and labor not in terms of resistance to change, but change of resistance in order not to destroy in medicine the very patterns of excellence and idealism it seeks to preserve.

MEDICAL EDUCATION: ITS AIM AND COST

The fundamental role of medical education is to continue what hopefully - but perhaps naively - was first started in the home, and thence in the school and university: not the accumulation of facts and mere knowledge, but an intense desire to utilize knowledge and grow in education. For medical education can not produce in four years and one year of internship a finished doctor of medicine. This is not possible. Nor can the requirements for the practice of medicine be met in four years of university training as now known. Indeed there is need in high schools for higher education and the establishment of elementaryschool education at an earlier age. Regardless, four years of medical school can only assure physicians the acquisition of the rudiments of clinical medicine and skills, not for its relevance to future practice but to future learning.

Last year 86 medical schools across the country admitted approximately 8250 students, 18 and 21 years of age. Since 1948, however, the number of applicants to schools of medicine across the country has decreased from 24.-242 to 14.951 in 1960. Yet undergraduate enrollments have increased. Therefore, in order to maintain a ratio between physician and population (heretofore approximately 130 physicians/ 100,000 population) the number of applicants accepted for medical education was increased from 6.973 in 1948 to 8.510 in 1960. Obviously the ratio of physicians to population varies widely across the country. As examples, the ratio in New York State is 187/ 100,000 population; in Colorado, 145/100.000; in Alabama, 74/100,-000, and in South Dakota 68/ 100,000.

Approximately 30 years ago there was one specialist for every five physicians in general practice. Today there are approximately 78,635 specialists and 81,957 physicians in general practice. In addition, over the period of the past three decades, physicians have increased 20 per cent, but the population has increased at twice that rate.

Medical schools generally require for admission an academic

grade average of B. or its equivalent. (Penmanship is still not a requirement.) The Medical College Admission Test (MCAT). however, must be passed successfully, for it reflects fairly well learning abilities of applicants, and addition measures potential achievement in chemistry, biology, and physics. But there is need for prospective physicians at the university level to participate more and more in courses concerned with the humanities and social sciences. Indeed, there is extraordinary need for a reasonable parity between humanism and natural and social sciences.

Persons contemplating the study of medicine face education costs. The mean total cost for four years of medical school education is approximately \$11,640 or \$2,910 a year. Tuition in private schools is between \$1000 and \$1500 a year, and in state schools approximately \$700 a year. The cost, however, may be met in several ways. Eighty-two per cent of students meet it with gifts and loans from parents, relatives and friends, as well as from a wife's income. Eighteen per cent, on the other hand, derive help as loans from agencies outside the family. But there is nothing wrong with working part of one's way along. Many physicians do this. As a matter of fact, up to 59 per cent of medical students work in medical schools, and 70 per cent of these work up to 20 hours a week at night and on weekends, either as laboratory technicians in hospitals, as research and teaching assistants, or

as externs in hospitals.

THE OPPORTUNITY

Such students of medicine are capable of facing challenges to medicine as a profession and vocation. And there really has never been a better time to face challenges — nor to become a physician. For opportunities in medicine, like challenges, are greater than ever before: the opportunity and challenge to pursue idealism

and quality, and to determine the fate of freedom by what we do with freedom. Our standards of quality are unerringly determined by how we bend our energies to see that what is done is done carefully and well, achieving thereby a degree of high-grade individual responsibility greater than ever before. "Quid hoc ad aeternitatem?" ("How does this look in the light of eternity?")

CATHOLIC MEDICAL MISSIONS

During the week of the A.M.A. convention in New York, the Catholic Medical Mission Board will sponsor two sessions on medical and paramedical services by lay personnel in overseas hospitals. The purpose of the meetings is to aid in coordinating efforts to help interested personnel get to places in the field where their talents and training will be most effectively employed.

Dates for the sessions — JUNE 26 and JUNE 29 at 3:00 p.m. each day. The meeting place will be in the WARWICK ROOM of the WARWICK HOTEL, 6th Avenue and 54th St., New York City.

Those interested in efforts to aid this important movement are urged to attend.

Tenth International Congress of Catholic Doctors

The Guild of St. Luke, SS. Cosmas and Damian, the Catholic Physicians' Guild established with headquarters in London, with the support of the Midland Catholic Medical Society, has undertaken the formidable task of organizing this Congress to be held in that city, July 9-13, 1962.

The Cardinal-Archbishop of Westminster, the Apostolic Delegate, and the Hierarchies both of England and Wales and of Scotland have given the project their approbation and blessing.

Previous Congresses, each specially blessed and favoured by the Holy See, took place before the last War in Brussels and Vienna, and since the War have been held in Lisbon, Rome, Paris, Dublin, The Hague, Brussels, and Munich.

These remarkable manifestations of international solidarity among Catholic doctors provide a forum for the discussion of important medico-moral problems and an occasion for gracious hospitality (both official and private) and the forging of numerous and enduring bonds of friendship for the participants.

A large attendance from Europe, America and the Commonwealth is anticipated. The Congress Committee is working to ensure that this Tenth Congress will maintain the standards previously established and be not unworthy, intellectually and socially, of the capital of the British Commonwealth.

The Congress theme, "The Catholic Doctor in Changing Societies," will develop the following topics:

The Catholic Doctor and the Problems of the Adolescent

The Catholic Doctor and the Aging Population

The Catholic Doctor and the New Approaches to Mental Health

The "Hopeless" Case

The Catholic Doctor in the Newly Independent Countries

The Scientific Sessions will be held at Church House, Westminster (near Westminster Abbey). Its situation, ample accommodation, and general arrangements, which include a restaurant and a cafeteria, make it the most suitable place in London for the Congress meetings.

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It is equipped for simultaneous translations.

Four papers will be read at each session, followed by discussion. Plans are in hand for tours and excursions, concert and theatre parties, and other entertainments.

There will also be a special Programme for the Ladies and guests accompanying Members.

The Ladies' Reception Centre will be at the Challoner Club, 59-61 Pont Street, London, S.W.1.

The Registration Fees are (provisional):
Members of Congress £ 6 (approx. \$16.80 U. S. currency)
Associate Members £ 3 (approx. \$8.40 U. S. currency)

The fee covers the Congress Badge and Handbook, Meetings, Receptions and all entertainments, except the Dinner and Ball, tickets for which will cost £ 3 each.



A GRAND TOUR of Europe is being offered by the International Travel Advisors, Inc., St. Louis, Missouri to follow the International Congress. Leaving London on the night of the 13th, the itinerary will include Holland, Germany, Austria, Italy, Switzerland, and France, and return to New York on August 10. For those with limited time, a two-week trip through the British Isles is also available. An extended tour of five days to Lourdes and Fatima will also be offered.

This Agency will make transportation arrangements from New York by air (leaving July 7) or ship (date still to be ascertained) for the Congress as well as hotel reservations in London for the meeting, as a courtesy for the American doctors and their families taking the Grand Tour. The European tour plans begin at the close of the sessions on July 13.

The LEP Travel Agency in London will handle tours in the vicinity of the Congress from July 9-12.

For the present time, direct inquiries to Miss Jean Read, Executive Secretary, National Federation of Catholic Physicians' Guilds, 1438 So. Grand Blvd., St. Louis 4, Missouri, who is in contact with the International Travel Advisors, Inc.

The Federation hopes that a large number of our American physicians will be interested in the 10th International Congress of Catholic Doctors and will make plans to attend. Those interested in giving papers should contact Dr. J. W. Dignan, 58 Sebert Road, London, E.7.

The vacation trip to follow would provide a memorable summer for 1962 for our doctors and their families.

Provisional Programme 10th International Congress of Catholic Doctors

Sunday, July 8, 1962	8:00 p.m.	Eve of Congress Reception of Members by the Master on behalf of the Guild	
Monday, July 9 10:30 a.m.		Solemn High Mass coram Cardinale in Westminster Cathedral	
	3:00 p.m.	Ceremonial Opening of the Congress at Church House, Westminster	
	8:00 p.m.	Reception by the Hierarchy at Archbishop's House, Westminster	
Tuesday, July 10	9:00 a.m.	First Scientific Session: "The Catholic Doctor and the Problem of the Adolescent"	
	12:45 p.m.		
Wednesday, July 11	9:00 a.m.	Second Scientific Session: "The Catholic Doctor and the Aging Population"	
	12:45 p.m.		
Thursday, July 12	9:00 a.m.	Third Scientific Session: "The	
	12:45 p.m.	Catholic Doctor and the New Approaches to Mental Health"	
	7:00 p.m.	Congress Dinner and Ball	
	1:30 a.m.	The Dorcester Hotel, Park Lane, W.1	
Friday, July 13	9:00 a.m. 12:45 p.m.	Fourth Scientific Session: "The 'Hopeless' Case"	
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	2:00 p.m. 4:15 p.m.	Fifth Scientific Session: "The Catholic Doctor in the Newly Independent Countries"	
	5:00 p.m.	Closure of Congress.	
**	6:00 p.m.	Short Thanksgiving Service	

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ELECTRONIC AUTOMATION IN MEDICINE:

Its Moral Implications

CARLOS VALLBONA, M.D.

The application of electronics to medicine in this century has been an outstanding contribution to medical science and education, and has enabled thereby a greater understanding not only of the function of many systems of the human body but also of the natural history of disease processes. In this connection, the electrocardiograph and the electroencephalograph epitomize benefits of the application of biophysics in clinical medicine. In addition, other biophysical instruments have been developed to study a variety of physiological events at the bedside and in the laboratory. Therefore, it is not surprising that medical schools have chosen to use electronic instruments more and more in basic medical education. and that the understanding of physiological phenomena by medical students, for instance, has been significantly facilitated in laboratories of experimental physiology equipped with electronic devices that record simultaneously a number of different physiological events, 1, 2

Although the impact of automation and use of electronic computers in industry is duly appreciated, their recent introduction in medicine introduces this question: Can moral problems arise from the widespread application of electronic computation? Therefore, at the dawn of an era of electronic computer usage in medicine, I should ask if either current or future applications of electronic data processing techniques and computers in medicine are exempt from moral consequences.

On January 14, 1959, the first Conference on Diagnostic Data Processing was held at the Medical Electronic Center, The Rockefeller Institute, in New York City. Since then the number of papers, hitherto scanty, dealing with electronic data processing techniques in medicine has increased rapidly. Many of the publications have dealt with particular applications of computers to specific research problems; others, fewer in num-

A. A., and Randall, W. C.: Electronic Instrumentation in a Medical Physiology Laboratory — an Evaluation After 2 Years' Experience. J. M. Educ. 35:660, 1960.

3 A complete bibliography is beyond the scope of this article. The reader is referred to Proceedings of Conference on Diagnostic Data Processing. Sponsored by The Medical Electronics Center of the Rockefeller Institute (IRE Transactions on Medical Electronics ME-7: 4, October, 1960), and to the Proceedings of the 1st and 2nd IBM Medical Symposia (IBM Education Center, Endicott, N. Y.).

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¹ Hoff, H. E., Geddes, L. A., and Spencer, W. A.: The Physiograph — An Instrument in Teaching Physiology. *J. Med. Educ.* 32:3, 181, 1957.

² Peiss, C. N., McCook, R.D., Rovick,

ber, with the application of electronic data processing techniques or computers to general medical problems. Finally, some papers are merely a futuristic view of the vast potential use, as well as the role, of automation in medicine.

At this point. I should like to distinguish between electronic data processing techniques in general and electronic computers in particular. Electronic data processing instruments are capable of handling a large number of data - sorting, classifying, tabulating, plotting, and storing them according to pre-established routines and methods. Such tasks are accomplished at speeds unattainable by human and mechanical means. Electronic computers, however, do more. They not only perform multiple arithmetic and more complex calculations, but also make logical decisions pertaining to the data with which they work. Such efficiency and accuracy account for their increasing use to control automatically most of the operations of certain industrial plants and engineering systems.

ELECTRONIC COMPUTERS

The efficiency of electronic computers derives from their easy manipulation of all the items of information that have been previously converted into a code of electrical signals of absolute character; i.e., the presence or absence of an electrical charge. The conversion of alphabetic or numerical information into a simple code of electric charges has been the goal of years of multidisciplinary investigation. Most current elec-

tronic data processing instruments convert automatically into code any information with the form of digits or numbers. For example, a number comprising two digits such as "13" is immediately accepted by an instrument and coded into a set of charges. Likewise, a letter, for instance "A", can be converted into an intermediate code of one or two digits which in turn can be converted into a set of charges arranged, however, in such a way to characterize the letter "A" and only that letter.

Electronic data processing instruments and computers accepting information in digital form are called digital electronic data processing equipment or digital computers. Other computers manipulate information in the analog form; that is, a quantitative but not digital expression of an event. For example, the position of the needle of a car's speedometer is an analog expression of the speed of that car. The digital expression of the same speed would be given in numerical units of distance per unit of time (e.g. miles per hour). Analog computers perform calculations with analog information in a manner similar to digital computers.

Most current instruments detecting physiological events record them in analog form. Events like the electrical activity of the heart (ECG) or that of the brain (EEG) are phenomena that we have learned to recognize from their analog presentation. Analog computers that would analyze automatically the information contained in these analog records

will be of real usefulness in medicine. Digital computers, on the other hand, will be more suitable for comprehensive quantitative analysis of large volumes of clinical and laboratory data.

CURRENT MEDICAL USES OF ELECTRONIC DATA PROCESSING TECHNIQUES AND ELECTRONIC COMPUTERS

Electronic data processing techniques and electronic computers (analog or digital) have been applied to medicine for the following purposes: 1) large scale statistical analysis of clinical and research data; 2) collection and processing of medical information concerning the natural history of disease processes; 3) testing complex physical models of biological systems; 4) aiding the establishment of clinical diagnosis; and 5) automatic control of the activity of electromechanical substitutes of physiological systems (heart-lung machines, respirators, etc.).

A MORAL CONSIDERATION

Plausible as they may seem, the tasks assigned to computers in medicine may not be provided with moral impunity. Strangely, the moral vulnerability of computers derives not only from man who has invented and designed them, but also from their potential dangers beyond possible human control. Such a potentiality was emphasized recently by Dr. Norbert Wiener. In pointing out the possible moral and technical con-

It must be understood that the danger lies in the computer's almost unlimited capacity to store information, to manipulate it and originate thereby new control-information at a speed inconceivable to human beings. To some, any thought of danger or threat resulting from the work of computers may sound preposterous, for whatever information is given to computer must be given by man. Indeed, to borrow the words of the Doctor of Aquinas, the computer "est quam tabula rasa in qua nihil scriptum est." But in contrast to the "tabula rasa" of the human soul, the computer can accept new information at a fantastic speed. Therefore, it is not difficult to conceive a computer of such extraordinary capacity so as to store all the information that man has ever known since his creation, and in addition deliver that information in a formidably small period of time. What, then, can we ask the computer to do with all this knowledge? And for what purpose?

Assume for a moment that current work in developing a suitable code for all medical information and knowledge has been finished, and further, that such information and knowledge has been transferred to the computer's electronic memory. Now the computer is ready to "work" this information.

sequences of automation, Wiener said: "Machines can and do transcend some of the limitations of their designers, and that in doing so they may be both effective and dangerous."

⁴ Wiener, Norbert: "Some Moral and Technical Consequences of Automation", Science 131: 1355, 1960.

The question then arises "What can we ask the computer to do?" It may categorize for us the signs and symptoms of disease processes if we provide the computer with some indication of what a disease process is. It could also classify different diseases if we gave instruction on how to proceed to classify such diseases. Perhaps it would even establish cause-effect relationships if we previously had defined what constitutes a cause and what constitutes an effect of the cause. It might also establish the range of variation of function in health and what constituted significant departure from health.

Provided with such capabilities. the computer would then be ready to accept any medical information from a person and detect readily thereby an incipient disease. If allowed to do so, the computer could conceivably set up a whole series of therapeutic measures and to correct automatically the degree of departure from health which the computer established so accurately. The danger of such an Utopian plan lies in the speed at which the computer would perform the forenoted steps, thus reaching a point when efficient interference may become impossible. For Dr. Wiener also states5: "If we use to achieve our purposes a mechanical agency with whose operation we cannot efficiently interfere once we have started it. because the action is so fast and irrevocable that we have not the data to intervene before the action is complete, then we

had better be quite sure that the purpose put into the machine is the purpose which we really desire and not merely a colorful imitation of it." In complete agreement with this idea, we may indicate that the moral danger of using this kind of automation in medicine lies in the human incapability of defining accurately the very purpose of the work of the computer itself. And were we even to assume a computer could serve best to correct physical disorders of man, can we assure it will best serve man's psyche also?

The forementioned description is, no doubt, far from becoming a reality. Indeed, it may never become a reality. Initial steps, however, have already been taken, and it is pertinent to analyze the possible morality of such steps and to discuss the moral aspects of certain applications of automation in medicine. For even at the risk of allowing unnecessary freedom to our projective thoughts "we must always exert the full strength of our imagination to examine where the full use of our new modalities may lead us."6

THE DIAGNOSTIC AUTOMAT

If and when the day comes that a computer will be capable of making an accurate diagnosis on a patient presenting an array of bizarre symptoms, enormous relief will be felt by those who consider clinical diagosis as the most important task of a physician. We shall not discuss the obstacles already encountered in programming the task of the computer to estab-

⁵ Ibid.

lish accurate clinical diagnoses of certain disease processes. Instead, assume for a moment that all the difficulties have been superseded and that an infallible "automat" diagnostician already exists. Then, it would appear simple to ask the computer to identify a whole group of signs and symptoms and categorize them according to a specific disease. However fascinating, this would help to solve but few problems the modern physician is apt to encounter.

In instances of clinical emergency resulting from deranged body function, it is far more important to assess accurately the patient's degree and quality of deterioration; indeed, this may take precedence over the establishment of a clinical diagnosis of disease. Nor is the patient *himself* less conconcerned about whether he is healthy or ill, and if he is ill, what can be done to make him healthy. In fact, almost always this is the only concern of the patient, not what the name of his illness is. Many persons, of course, inquire about the diagnosis because they have acquired the habit of learning characteristics of specific disease processes, as well as their incidence, symptomatology, prognosis, and treatment. At times this serves to ease the physician's obligation, permitting the patient awareness of difficulties lying ahead. All too often, however, such situations tend to lead to increased anxiety, the patient considering himself doomed to the worst aspect of his disease. It is unquestionable that most patients are not instructed on the spectrum of individual variation of diseases as we conceive them today. The patient of the future perhaps will be more conscious of this variability and he, like Tolstoi's Ivan Ilvitch7 will not feel any relief when confronted by either doctor or computer who can only say: "such and such a thing shows that you have such and such a thing in you, but if this is not confirmed according to the investigation of such and such a man, then you must suppose such and such a thing. Now if we suppose such and such a thing, then . . ."

describing the foregoing situation. Tolstoi indicates that "for Ivan Ilyitch only one question was momentous: was his case dangerous, or not? But the doctor ignored this inconvenient question. From a doctor's point of view. this question was idle and deserved no consideration; the only thing to do was to weigh probabilities." May we ask if a computer capable of establishing a diagnosis would consider Ivan's question idle, also? Will the weighing of probabilities be the most important thing the computer would be capable of doing?

MORALITY OF AUTOMATIC THERAPY

Were a computer to diagnose with accuracy clinical syndrome, it also is likely that it could select the best treatment for that particular clinical situation, and the selection would be made correctly and with rapidity. Therapeutic experiences of countless profes-

⁷ Tolstoi, Lyof S.: The Death of Ivan Ilyitch (New York, Thomas Y. Crowell Co., 1899) The Complete Works, II, p. 31.

sional persons who had treated similar cases over the years would have been collected in the computer's memory. Thus, it would be a simple, logical task for the computer to determine which one of the many already tried treatments would provide most beneficial results. Here again, one must consider the morality of the computer's electronic judgment; how to decide if treatment is good or bad, and how good or how bad is it?

For centuries, physicians have disagreed on the right or wrong of innumerable therapeutic measures. It is unlikely that computers would settle such disagreements since the computer's therapeutic decision would depend solely on the experience gained with various kinds of treatment with or without regard to their moral values. If such were the case, the computer's pronouncement of treatment obviously should never be taken as a dictum to which no moral test could be put. As an example, what if a computer upon consideration of a pregnancy complicated by serious disease were to recommend a therapeutic abortion as the best solution? Or, are we to anticipate the computer's strong recommendation to sterilize those with a dominant trait of a severely disabling condition? Could the computer eventually make an impersonal announcement simply by weighing probabilities, or would a moral judgment be made according to the patient's own scale of values, the physician's scale of values, or society's scale of values?

Even more dangerous from a moral standpoint could be the therapeutic decisions of computers when these were used as guides in the management of a patient by a series of automatic control devices. Preliminary experiments with such systems have proved successful to induce and control anesthesia. It is likely that similar systems will also be used in the future in order to manage automatically those patients with severely deteriorated pathophysiclogical situations. Since such situations continuously change, they will require swift readjustments of the control mechanisms. Thus, the assessments and decisions of the computer would have to be both accurate and fast. It is doubtful that the physician and the auxiliary personnel could even keep note of such decisions. Indeed, at times the physician might find himself completely defenseless either to prevent or correct a decision therapeutically sound but morally wrong.

Could we expect, for example, a computer to decide to terminate the life of a patient with pathophysiological situation deteriorated beyond hope of reversibility? Would this decision, however expedient and efficient to the computer, be tested in a proper moral perspective? Of course not. A plea for critical appraisals of the moral aspects of any method of automatic control as powerful as the one envisioned here may sound not only dramatic, but even fanatic to some. It might even appear out of perspective, for it would be just as simple to initiate

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automatic correction of pathophysiological alterations immediately after they occur, as it would be to discontinue such automatic control at the precise point where a decision beyond the capabilities of the computer should be made. The plea may sound more justified, however, to those already aware of these latter situations being possible if - and only if - the stop at the crossroad of a moral decision has been anticipated by the physician programming stepby-step the evolution of the automatic control process before it had been allowed to start.

AUTOMATIC MEDICAL INFORMATION: RIGHT OF PRIVACY?

Full scale application of electronic data processing techniques in medicine would permit storing the records of all clinical situations arising in the course of a person's life. Multitudinous medical records collected according to these methods could be made available to any physician. would doubtless be a blessing to both the patient and physician to have such complete information readily available. This kind of medical "historian" has been envisioned by Dr. Almy.8 He has suggested the creation of a national library of past histories of

all persons living in this country. He illustrated an extreme advantage of this system. An unconscious patient is brought to the hospital emergency room without identification data. Upon proper coding of the patient's fingerprints a code number would be transmitted to the central library of medical histories. In a matter of seconds, all medical information available on the patient would be transmitted from there to the physician treating that patient despite vast distances separating the physician and the library. Outside of the theoretical advantages of the forementioned system, would the documentation and coding of the patient's medical history throughout his life be an invasion of his privacy?

Indeed, a person realizing that all kinds of intimate information concerning himself is available in seconds to innumerable persons in the world may justifiably fear that without his having really much control, such information might be released not always for his own good. The issue of life insurance policies, the selection of personnel for specific jobs, perhaps even the mating of couples, could be seriously affected by an automatized system of recording medical information. If our society ever reaches this level of organization to what extent will decisions be based on mathematic expressions of materialistic values while spiritual considerations will be set aside because they are not quantifiable?

⁸ Almy, Thomas P.: Some Comments on the Usefulness of Electronic Data Processing in Medical Practice. Proceedings of Conference on Diagnostic Data Processing. Sponsored by The Medical Electronics Center of the Rockefeller Institute. (IRE Transactions on Medical Electronics ME-7: 4, October, 1960.)

AUTOMATION AND PATIENT-PHYSICIAN RELATIONSHIPS

Patients themselves have followed with extraordinary interest progress made with the use of computers in medicine. Some are delighted over the prospect of a machine capable of infallibly tagging their ailments, assessing a prognosis, and selecting the best possible treatment. Some physicians look at such a possibility as a more tangible threat than that of socialized medicine. Full reassurance can, however, be given to both the over-optimistic patient and the overly concerned physician that such situation should never come about.

Since its initiation the use of electronic data processing techniques and computers in medicine has been carefully studied and evaluated. Those making pioneer efforts in this field are aware not only of the capabilities and limitations, but also the dangers in the use of powerful tools of automation in medicine.

Judging the initial trends we may envision with confidence that a full-scale application of computers in medicine will lead to an improvement of the relationships between the physician and his patients. This relationship may become warmer than ever before in the history of medicine, for computers may prove extremely useful to the physician in detecting and pointing out hidden signs of illness long before they become readily apparent to the patient himself. Correlations hitherto unsuspected between certain aspects of the psychological and physiological behaviors of a patient may become apparent and permit the gearing of treatment in the right direction. By no means do we anticipate that computers will replace the physician's role in interpreting medical data. On the contrary, greater scope will be permitted by this interpretation and the physician's judgments will be more scientific than they have been at times.

Physicians have always been aware of technological achievements and have been ready to apply them to medicine when betterment of man's health can result from this. Computers and electronic data processing techniques have been one of the outstanding achievements of the last decade. They have entered the medical field at a fast pace. Physicians need not be wary of this intrusion. On the contrary, they must welcome it, for if properly used it will contribute immensely to the scientific progress of medicine. Whether we agree or disagree on some of the moral considerations we have presented is irrelevant at this point. Agreement must be reached, however, on the moral obligation of all physicians, for keeping abreast of current and future technological advances and for the progress made with the application of these achievements in medicine. May this plea reach especially those engaged in teaching activities, for in the education of today's medical students, computers and electronic data processing techniques will become tools of importance at least equal to the

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methods used by past generations of medical educators.

ACKNOWLEDGMENT

Papers of a philosophical nature on a controversial subject seldom reflect the views of only one individual. This article is not an exception. The thoughts contained herein have crystalized from many conversations on this subject which I have had with my associates in the work on automation of clinical and research data at the Texas Institute for Rehabilitation and Research. Acknowledgment is given here to the stimulating opinions and thoughts of Drs. William A. Spencer, David Cardus, and Fred M. Taylor who have reviewed this paper critically.

ATTENTION!

Physicians

Attending the A.M.A. Convention The Coliseum, New York City — June 25-30

The National Federation of Catholic Physicians' Guilds will again be an exhibitor at the A.M.A. convention at the Coliseum, New York City, June 25-30. Consult your program for space C-26.

As in previous years, the Booth will need staffing. Catholic physicians willing to give a few hours time to meet visitors during the six days of the convention are urged to write:

GERARD P. J. GRIFFIN, M.D. 311 Garfield Place Brooklyn, New York

Please advise the day and time you will be available. The Exhibits open one day earlier this year. Be sure to visit the Federation Booth and bring others with you.

Current Literature: Titles and Abstracts

Material appearing in this column is thought to be of particular interest to the Catholic physician because of its moral, religious, or philosophic content. The medical literature constitutes the primary but not the sole source of such material. In general, abstracts are intended to reflect the substance of the original article. Parenthetical editorial comment may follow the abstract if considered desirable. Books are reviewed rather than summarized. Contributions and comments from readers are invited.

Ritter, J. W.: Postmortem cesarean section, J.A.M.A., 175: 715-716, Feb. 25,

Although postmortem cesarean section is a rare occurrence, several historical personages have been born in this manner, including Scipio Africanus, Pope Gregory XIV, and Andrea Doria. In 1280 A.D., the Church took cognizance of this procedure at the Council of Cologne. In the modern era, comprising the past 250 years, there have been a total of 120 successful postmortem cesarean sections. The author reports two personal cases. While there is no adequate specific legislation concerning this operation in the United States, the physician is obligated to attempt to save life when it can be done without hazarding or harming another.

Ladimer, I.: May physicians experiment? International Record of Medicine, 172: 586-598, October, 1959.

The physician must experiment if he is to improve. The right and duty to experiment are not, however, absolute. Limits derive from four quarters: the ethics of the biological-medical professional community; the standards of repu-table medical and health institutions; the law; the social climate and opinion of the public.

1. Ethics of the Profession

a) Animal experimentation should precede human experimentation whenever possible.

b) The value of the project must be commensurate with the risk or hazard.

c) Use of subjects should be limited to the number necessary for the purpose.

d) No present benefit or remedy should be withheld from a patient in the interest of trying something novel.

e) Researchers must seek for the natural experiment, i.e., not induce pathology if there is expectation that it might occur naturally.

f) The researcher must have demon-

strated his mastery of the required skills and training necessary for the research.

2. Codified Standards
a) The Nuremberg decision stresses the points noted above under number 1, but also stresses the voluntary consent of the patient and proper precautions against any possible harm to the patient. It also affirms that no experiment should be permitted where there is a priori reason to expect death or disabling injury.

b) Pope Pius XII held experimentation on man licit as long as the consent of the patient is had and the granting and taking of human life is not placed

in human hands.

 c) The World Medical Association, the Public Health Service, the Judicial Council of the American Medical Association have espoused views similar to those expressed above.

d) To insure the observance of these norms, most hospitals and clinics require that proposed experimentation be approved by a board of review. Researchers should take care to observe these various norms not only to insure protection to the patient, but to obtain the best scientific results as well as to obtain legal protection.

3. Legal Aspect

There is no American statute that specifically regulates, prohibits, or governs medical experimentation per se. For practical purposes, the major issues relate to consent. Putting aside acts which are legally or morally unacceptable, the legal adage, volenti non fit injuria, holds. Care must be taken that this consent be made by a competent person with as full knowledge as possible. Researchers should not go beyond the explicit consent

4. Public Attitude

The public is at once favorable to experimentation and wary of it. searchers through adherence to recommended legal-ethical standards and professional self-discipline, will sustain the high plane of scientific investigation and establish a prophylactic malpractice program for human research.

- R.L.M.

Phillips, P. B.: Early signs of impending breakdown in flight personnel; the practising physician's contribution to commercial flying safety, Canad, Med. Assn. J., 84:149, Jan. 21, 1961.

A pilot's physician has a dual responsibility which involves public safety as well as the care of the pilot. If a pilot is found to have a serious emotional disorder, it is mandatory that he be grounded and there is a moral obligation to inform the responsible member of his family.

Thomas, G. W.: Pregnancy and tuberculosis, Canadian Medical Association Journal, 81: 710-714, 1959.

Sixty-three tuberculous mothers, with 228 full-term pregnancies and 16 miscarriages, have been studied. There were four cases of reactivation of tuberculosis and three deaths — all in the far-advanced group. The three deaths occurred in untreated or inadequately treated cases. Pregnancy has no influence on the course of tuberculosis in minimal and moderately advanced cases. Patients with far-advanced disease have the worst prognosis, and the management of pregnancy may be influenced by it. Therapeutic abortion has no place in the treatment of tuberculosis.

- I.S.N.

Reis, R. A.: Cesarean hysterectomy, Clinical Obstetrics and Gynecology, 2: 977-984, December, 1950.

With cesarean hysterectomy no longer necessary in the management of intrapartum infection, the valid remaining indications include: (1) uncontrollable uterine hemorrhage following cesarean section; (2) uterine fibroids which in themselves indicate removal of the uterus; (3) defective scar with or without actual rupture of the uterus; (4) carcinoma in situ of the cervix; (5) placenta accreta, diagnosed at the time of cesarean section; (6) cervical or vaginal stenosis; and (7) certain medical conditions in which the continuation of menses is undesirable.

To the above list of indications some authors have added the need or desire to effect sterilization as an indication for cesarean hysterectomy. Many authors believe that sterilization by cesarean

hysterectomy is to be preferred to the method of tubal ligation. But this present-day trend toward hysterectomy at cesarean section for the sole purpose of When atsterilization is questionable. tempts are made to summarize present thinking on this question, it is obvious that there is no unanimity of opinion. For those who believe that hysterectomy in a younger woman is not only harmless but also beneficial when no further offspring is desired, it will continue to be a logical development in preventive ob-stetrics and gynecology. For those who are inclined, for one reason or another, to be less liberal in their indications for sterilization, for those who feel that sterilization is an irreversible annulment of childbearing functions, for those who feel that hysterectomy with loss of menstruation relatively early in life frequently produces a most undesirable psychic effect upon many patients and/or their husbands, cesarean hysterectomy will not seem a rational method of sterilization. Even some advocates of cesarean hysterectomy for sterilization admit that emotional sequelae may be extremely discouraging without meticulous selection and careful explanation.

- D.P.M.

Tyler, H. T.: Oral contraception, J.A.M.A., 175: 225-226, Jan. 21, 1961.

The Food and Drug Administration has approved the use of oral norethynodrel, a synthetic, progesterone-like compound, for the cyclic inhibition of ovulation. The new ruling limits the use of the hormone for any individual to two years. The pill approved by FDA contains 9.85 mg. of norethynodrel and 0.15 mg. of a potent estrogen, the 3methyl ether of ethinyl estradiol. Recommended dosage is one tablet daily from the 5th to the 25th day of the cycle. It has been found to be as effective as the diaphragm and jelly. Vaginal cytology and endometrial biopsy following prolonged use in many subjects, and in some instances compared with controls, show no evidence of harmful effects. About 25% of subjects experience nausea or other gastro-intestinal disturbance at this dosage during the first few cycles. About 5% of cycles may be associated with intermenstrual spotting or bleeding. Increasing the dose will prevent this. A small percentage will fail to bleed during the interval of cessation of medication. A one-month course of 10 mg. norethynodrel (20 tablets) costs \$9. A trial of 5 mg. tablets shows equal effectiveness, but more breakthrough bleeding. Patients discontinuing the drug have had no difficulty in subsequently conceiving.

— R.I.C.

THERE IS MOUNTING evidence to indicate that the use of progestin-like hormones for contraception is not with-out hazard. Word from Germany suggests that large doses of estrogen early in pregnancy may induce gross developmental defects in the offspring. Thus, H. Uhlig (Geburtshilfe u. Frauenheilkunde, vol. 19, 1959, synopsized in J.A.M.A., 170:1832, Aug. 8, 1959) reports three cases of multiple severe developmental defects in children mothers receiving such therapy, and was able to produce the syndrome in pregnant rats. Recent correspondence in J.A.M.A. also expresses the fear that anovulatory contraceptives may result in malformed children (Kautsky, K.: Routine contraception, J.A.M.A., 175:730, Feb. 25, 1961).

Randall, L. M., and Schmitz, H. H.: Carcinoma of the breast and pregnancy, American Journal of Obstetrics and Gynecology, 78:1353-1357, December, 1959.

In the case of carcinoma of the breast in a pregnant woman, it is agreed that operation or irradiation would be dangerous and undesirable for the fetus at 32 weeks of gestation. Castration adds nothing to survival figures when used prophylactically, but is of benefit in recurrence when the estrogen withdrawal program is being used. There is disagreement whether future pregnancies offer a possible hazard and might stimulate a recurrence of the cancer, or whether the recurrence would come back or not, independently of pregnancy or non-pregnancy.

- R.J.T.

O'Donnell, T. J. (S.J.): Intravaginal instruments: A medico-moral evaluation, *Theological Studies*, 21: 460-464, September, 1960.

Most theologians associate the word "pessary" almost exclusively with contraception. But not all pessaries are contraceptives. Dorland's American Illustrated Medical Dictionary (21st ed.) defines pessary as "an instrument placed in the vagina to support the uterus or rectum." For the purpose of this note, pessaries may be divided into three general classes according to their purpose: supportive, dilative, and contraceptive or

occlusive pessaries.

Supportive pessaries are used in those cases where, after natural uterine supports have weakened and displacement of the uterus has resulted, surgical repair is not immediately indicated.

Dilative or stem-type pessaries are used to widen the neck of the uterus when it becomes narrowed by stenosis. It may be used during intercourse, but after, it is an irritant to the uterus which sets up uterine muscular contraction. Hence, if conception should take place, the conceptus would be aborted within a fairly short time. Therefore, such a pessary, if used, would have to be removed before or immediately after intercourse. In addition, stem-type pessaries are considered dangerous by 92% of the experts consulted; and in 1957 the Federal Food and Drug Administration published a statement to the effect that stem-type pessaries are dangerous to health.

The evident immorality of the use of directly contraceptive devices needs no comment in this note.

~ J.L.B.

Stock, M. E. (O.P.): Some moral issues in psychoanalysis, *The Thomist*, 23: 143-188, April, 1960.

The opinion that psychoanalysis, on the part of the practitioner as well as the patient, is seriously sinful without reservation or distinction has been rendered untenable by Pius XII in a series of allocutions from 1952 to 1958. The Holy Father spoke on a variety of moral problems which might arise in psychological research and clinical work.

In 1952 he condemned the extreme position of some who hold that there are no limits whatsoever to the probing allowed in a psychoanalytic session. In particular he condemned the theory of pansexuality. He did not condemn unconditionally the techniques of psychoanalysis which may arouse emotions, even strong emotions, of a sexual nature or of any other kind which might ordinarily prejudice moral integrity. In his second allocution in 1953, he spoke more on the same points and also on the morality of permitting material sins.

In the third allocution in 1958 he returned to the question of personal moral integrity to consider more precisely the limits which might be morally justifiable

in psychoanalytic sessions. He acknowledged the permissibility, according to the principle of double effect, of allowing certain evils, even moral dangers, for a proportionately grave cause.

Making further precision on the questions considered by Pius XII, Father John Ford, S.J. comments on the Holy Father's condemnation of the pansexual theory and goes on to note four important points for consideration in psychoanalysis. First, it is clearly illicit to accept immoral advice. Secondly, there are many dangers which might accompany the phenomenon of transference. Thirdly, there is danger of aggravating rather than aiding a psychic disorder if, having turned the patient's moral world upside down by revealing his unconscious sources of conduct, the analyst is unable to establish a new balance, or tries to do so on the basis of false moral principles. Fourthly, there are inherent dangers in the use of free association and the incidence of abstraction. These last three factors lead to the discussion of the sexual sins which are likely to be occasioned in the psychoanalytic ses-

It does not follow that the occasions of such sins must be absolutely avoided. Where is the line to be drawn? Father Ford points to free association, abreaction, and transference as the processes in psychoanalysis whose moral aspects should be more thoroughly considered by theologians.

Free association is the spontaneous association of mental contents. In its purest state it is a psychological condition which can be voluntarily induced or permitted by allowing the courses of psychological phenomena to proceed without direction. It is the possibility of arousing the sexual passions that is of greatest concern to moralists here, and the principle of double effect must be applied cautiously. General conclusion: psychoanalysis can be continued without moral fault as long as it is psychologically beneficial, keeping in mind the possibility of moral culpability in cases where the patient always or almost always gives voluntary consent to the temptations to sin which occur in a psychoanalytic session.

The term "abreaction" is applied to emotional reactions which occur in analytic sessions, and which are characterized by a marked disproportion between the apparent cause of the emotion and the vehemence of its response. It has been compared to the emotional relief occasioned by confession. There are two special features: the semi-detached state of consciousness which characterizes the analytic session, and the special relationship of the patient toward the analyst, or transference. A second kind of transference is possible in which the patient feels sudden and otherwise inexplicable emotional reactions to members of his family or friends or associates, which could affect his social life and entail certain moral problems as well. Though it seems that abreaction, like any motion of the sense appetites, is morally neutral, taking its moral species insofar as it might be deliberately induced or permitted by some act of the will, there are three moral problems to be considered.

- (1) Is it per se morally evil because it necessarily involves loss of the use of reason? (2) If this is not so, what is the probability of internal consent, subsequent to the emotional impulse, which would be sinful if the impulse is evil?
- (3) What moral judgment must be passed on overt actions proceeding from abreactions, with a more or less definable degree of responsibility and more or less serious consequences?
- 1. It can never be intended by analyst or patient that the abreaction should formally usurp the rational control in the patient.
- 2. It would seem more probable that the patient would not consent internally to a sinful satisfaction to an emotion aroused in abreaction, though any particular case would have to be judged on its own merits.
- 3. All else being equal, a man is morally less responsible for his feelings than for his actions and words, for the reduction of the feelings to action normally requires an intervening voluntary decision. In regard to the possible injurious effects of the words and deeds of a patient, both the patient and the analyst would necessarily proceed more circumspectly. It does not seem necessary to prohibit psychoanalysis because of the danger in some cases of damaging actions, but it is evident that all precautions should be employed to minimize the risk.

[The Linacre Quarterly, vol. 19, 1952 included pertinent material by John C. Ford, S.J., entitled "May Catholics Be

Bickhoff, A. R.: The psychodynamics of Freud's critique of religion, Pastoral Psychology, 11: 35-38, May, 1960.

Freud's criticism of religion was not a criticism of religion at all, but an attempt to demolish the authority of his father.

In his day, Judaism in Vienna was not a spiritual way of life but a path of restrictions and frustrations. His contact with Christianity, with its pressure toward conformity, appeared to represent repressive authority. He thought of both of them as authoritarian and unreasonable forces in society.

To Freud, his father was a symbol of arbitrary authority. He wanted to be relieved of feelings of obeisance for his father, but because of early experiences, was unable to cast aside father dominance. So his rebellion against his father, by condensation, became allied to rebellion against all authority and was redirected to demolish the authority of religion.

Von Rohr, J.: Christianity and birth control. The Roman Catholic view. The Christian Century, 77: 1115-1118, September, 1960.

In Roman Catholic thought birth prevention interferes with nature's end. Opponents to the Catholic position cite the removal of cancer and the correction of failing eyesight as cases of interfering with nature. These, however, merely alter the process of nature to assist fuller realization of nature. They do not frustrate the end as does birth prevention. The Roman vomitorium, a means of elevating pleasure, a secondary end, to the primary place, and frustrating nourishment, the natural end, is a parallel to contraception.

Catholics allow two methods of birth prevention: abstention, with both partners agreeing and with no danger of illicit behavior; and rhythm, periodic continence. Rhythm was clearly established as a legitimate practice in certain circumstances, by Pope Pius XII in 1951.

Oral contraception has never been officially pronounced upon. Theologians, however, judge it on four points: (1) improper physiological redirection of nature; (2) interruption of generative processes after fertilization, i.e., abortion;

(3) prevention of conception by unnatural redirection, i.e., sterilization (temporary); (4) regularization of menstrual cycle to make use of rhythm possible. Only the last is licit.

[In his allocution to the Seventh Congress of the International Society of Hematology (Sept. 12, 1958) Pius XII discussed the oral contraceptives and explicitly confirmed what theologians have been teaching about them.]

- D.C.W.

Lumb, R. D.: The scholastic doctrine of law, Melbourne University Law Review, 2: 205-221, November, 1959.

The purpose of this article is to examine the doctrine of natural law as expounded in the words of Aquinas and Suarez. The reason for choosing these writers is that much jurisprudential writing of recent years contains references to "natural law." In all these cases the phrase "natural law" is used without much awareness of its meaning and the different elements which are part of it. It seems necessary, therefore, to return to the texts of these writers who have given the doctrine its classical formulation.

Concerning the Eternal Law (Sum. Theol, I-II, q. 91, a. 1.) it might be asked how a person, even though he participates in the Eternal Law, can conceive of its eternal origin. Aquinas employs an analogy to explain this paradox. He says that even though a person may not see the sun, he may nevertheless come to know it by its rays; so it is also with the end prescribed by nature. Aquinas recognizes that some people may be aware only of the immediate ends. The issue raised here depends ultimately on the position one adopts in regard to the natural law, viewing it as having autonomous force or as ultimately dependent on a legislator.

In one part of his discussion of the lex naturalis, Aquinas equates it with inclinations of which he lists three categories: (1) inclination to self-preservation, (2) inclination to procreation and the education of offspring, and (3) inclinations which are common to man only, such as knowledge of God and social intercourse based on justice. It seems that we can explain the first two categories of inclination as being included within the natural law only on the basis

that their moral significance derives from a judgment on the part of man as to their nature. In this context it would mean that the inclination ought to be tempered, in the case of this or that individual, by a realization that the needs of other individuals are involved. One ought not to seek to preserve one's life at all costs nor to engage in promiscuous sexual intercourse. In saying this we are, as a result, recognizing that there is a close relationship between all the inclinations, and that the lex naturalis has as its end an ordered system of human relations and cannot be identified with spontaneous activity alone.

If we restrict the term "natural law" to designate the judgments which are made as a result of the prompting of right reason, the question remains whether such judgments can be called precepts. Certain later writers have presented an interpretation of natural law which found its nature to reside in the judgment of reason alone, independent of any higher legislator. The difficulty into which Suarez fell on this question stems from the fact that his conception of law is centered on a superior-inferior relationship. If he had viewed law merely as a rule binding human beings, then his justification of natural law as "law" would have made sense.

If it be granted that there is an innate capacity to know the precepts of the natural law, what status does this capacity have in respect to the moral thought and action of any individual person? Does everyone actually know the precepts of the natural law? There is a difference between the control of the is a difference between saying that a person is bound by the natural law and saying that a person is aware of its binding force. St. Thomas' answer is somewhat ambiguous. It would seem that what he is asserting is that to act morally a person must accept the proposition that he ought to seek what is good, or rather, that to act morally is to act according to such a principle. If, however, Aquinas is comparing principles such as "do not steal" with the more remote principles, then he may mean that all men are aware of the fundamental duties though not all men may be aware of the less fundamental.

The principles of the natural law must not be seen as some type of panacea solving, in an automatic way, every problem which arises. No doubt the language used by the Schoolmen has the effect of picturing universal-type principles which are there to be recognized by every individual. But this cannot turn our attention away from the central features of moral activity, namely, that it is this person and that person who holds principles and that the task of application is not an easy one.

→ M.A.B.

St. John-Stevas, N.: Birth control and public policy, Commonweal, 72: 397-399, August 5, 1960.

The Protestant attitude toward contraception has changed and would now repeal the Comstock Law, whereas the Catholic Church has always condemned contraception. But does the Catholic Church require that contraception be banned by law, and must Catholics work for this end?

Catholics in England and America have the legal right to work for this end, but in the current socio-political situation is it advisable? Little would be gained for public morality — most people do not desire it, it is unenforceable, and great fear of the Church would be generated. Contraception is a breach of natural law, but not all breaches of natural law are suitable for public legislation. Catholic efforts to preserve public morality would be more constructive if confined to measures commanding general public support, such as the banning of the sale of contraceptives from vending machines or the restriction of sales to adults.

On the other hand, Catholics might legitimately and prudently oppose laws which in any way commit the state to approve or advocate birth control.

The use of public hospitals and health agencies to give contraceptive advice has caused conflict between Catholics and Protestants. In New York voluntary agencies give general advice concerning the use of contraceptives while in the public institutions, patients subject to certain conditions are not denied access to contraceptive medicines where the conditions endanger health.

That Protestant doctors, while discharging their duties in Catholic hospitals, should be restrained from giving advice on birth control is reasonable. To require them never to give advice on birth control would be a grave infringement of individual liberty and would deprive Catholic hospitals of many com-

petent medical men.

Catholic use of political pressure to counter meetings and organizations of planned parenthood have to be judged on the conditions prevailing in the local situation, but it seems that the hostility engendered by such methods can hardly be overestimated.

~ M.J.N.

Leazy, Z.: Criminal abortion: Facing the facts, Los Angeles Bar Bulletin 34: 355-360; 373-383, October, 1959.

It is estimated that the attempted criminal abortions in this country result in the death of between five and ten thousand women annually. Procurement of an abortion is a felony, with one exception provided by statute or case laws in most jurisdictions (including California), namely, that the termination of pregnancy be necessary to save the mother's life. In some few states abortion is allowed where necessary to pre-serve the mother's life or health, but this does not include conditions merely detrimental to a woman's mental or physical health. The result is that a woman who desires an abortion in a place where the narrower exception is law (her preg-nancy is not endangering her life) is abandoned by society in her greatest need, and she may fall prey to the unskilled abortionist because of the severity of the law.

The advance of medicine has made it less imperative to terminate pregnancy to save a woman's life. Most physicians recognize a professional responsibility to advise abortion, regardless of law, for many conditions which merely menace the future health of the patient, protecting themselves by getting from colleagues concurring opinions of the necessity of therapeutic abortions. Such activities on the part of physicians and hospitals are seldom questioned by law enforcement agencies, since public opinion dictates that authorities wink a legal eye.

Society is not protecting the mother's welfare by keeping stringent laws which drive her to illegal abortion. It is recommended that the legal exception be expanded to include: (1) medical indications that termination of pregnancy is necessary to preserve either the life or health (mental or physical) of the mother; (2) induced abortion on eugenic grounds (e.g., cases in which the mother

contracts rubella, i.e., German measles during the first twelve weeks of pregnancy, when there is a thirty percent chance of serious congenital defect or abnormality in the child, or where the child is likely to be born with a hereditary disease such as insanity, epilepsy, etc.). The risk of serious after-effects is almost negligible if the therapeutic abortion is performed by experts in hospitals. The law should require these minimum standards of performance, and a committee system in hospitals should be set up to police therapeutic abortions by physicians. Abortion should be allowed in cases of rape, incest, or moral irresponsibility of the female. The meaning of this last exception concerns those who lack sufficient physical or mental control over their conduct and perhaps should include adolescents under a certain age. Assuming that there is no medical or eugenic indication for therapeutic abortion of a pregnancy caused by rape, incest, or moral responsibility, the decision as to whether the situation falls within the statutory exception should rest, not with a hospital committee or other medical authority, but with legal authority. The legislature should provide that pregnant mothers be sought out before they become determined to have an abortion, and be given literature through physicians, hospitals, etc., on the dangers of illegal abortion. They should be shown how to get a legal therapeutic abortion and to see the possibility of other courses of action more constructive than abortion. Trained personnel should persuade these women that abortion, legal or illegal, might not be the best or the only solution for their medical, social, or economic problems. Perhaps birth might be better than they thought.

- F.E.K.

Morison, R. S.: Darwinism: Foundation for an ethical system? Christianity And Crisis, 20: 120-123, August 8, 1960.

Darwin's theory of evolution makes at least two important contributions that fall squarely in the field of man's historical preoccupation with religious and ethical speculation. First, he came up with a thoroughly rational and acceptable explanation of death. Contrary to what it may seem, Darwinism was not designed as an individualistic ethic. Every death is in a sense a hero's sacrifice for the greater good of the species. This is his second contribution. The survival of the fittest constitutes a continuous improvement of the community of

species. Self-sacrifice is built into the material roots of man's biological system. As a result, the selective process produces a group with an assortment of characters, rather than an individual with a specific set. A further development of the Darwinian hypothesis is that man uses his community membership as a primary mechanism of survival. It is clear that the long run advantages of social life are gained only at the sacrifice of the individual's immediately felt needs.

Although man's body remains admirably unspecialized, his culture has often become overspecialized. This rigid cultural specialization within the society entails too great an atrophy of individual abilities, and tends to meet the desires of a minority. Perhaps the crucial Darwinian question today is whether or not man can broaden his culture, his concept of brotherhood and tolerance of variation so that it becomes co-existent with his gene pool. The nominalist biological position is that there can be no ideal man. Men are brothers simply because they all draw their assortment of genes from a common pool. Every man in a sense must become his brother's keeper, but the emphasis is on keeping and expanding what both hold in common, not on converting one brother to the ideal image held by the other.

~ R.J.

Shinn, R. L.: A rejoinder to Dr. Morison, Christianity and Crisis, 20: 123, August 8, 1960.

In his rejoinder to Dr. Morison, Mr. Shinn states that no scientific theory can be the foundation of an ethical system. Ethics must take full account of facts: but what faith does with facts is the crucial issue of ethics. Furthermore, Dr. Morison's emphasis on the species leaves little place for the person. Christian love and concern for the person may bring about the correction of the stifling diversity and dissent among men.

APPEARING WEEKLY in J.A.M.A., the "Questions and Answers" section frequently contains material of medicomoral interest. Thus in recent issues, the following topics have been discussed: "Eugenic counsel in Alzheimer-Pick Syndrome" (March 19, 1960); "Vasec-tomy" (June 18, 1960); "Negative tomy" (June 18, 1960); "Negative eugenics" (Nov. 19, 1960); "Hodgkin's Disease and pregnancy" (July 23, 1960); "Radiation and reproduction" (Nov. 21,

1959); "Carcinoma in situ during pregnancy" (Nov. 28, 1959), and "Achondroplasia and heredity" (Dec. 19, 1959).

THE FOLLOWING are additional items of interest:

Tietze, C., Pai, D. N., Taylor, C. E., and Gamble, C. J.: A family planning service in rural Puerto Rico, Am. J. Obstet. & Gynec., 81: 174-182, Jan. 1961.

Marshall, John: Medicine and Morals (Volume 129 of The Twentieth Century Encyclopedia of Catholicism), Hawthorn, 1961. 141 pp. \$2.95.

Vogt, William: People! Challenge to Survival (Book condensation), Med. Economics, 38: 200-232, March 27, 1961 (The population problem).

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Readers interested in submitting abstracts, please send to:

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Important Events . . .

This year the National Federation is celebrating the formation of the One-Hundredth Guild of Catholic Physicians since the founding of the Federation twenty-nine years ago. The Federation is planning two commemorative events on Wednesday, June 28, 1961, during the week of the American Medical Association Convention in New York City. We wish to invite every Guild member and all physicians, their wives and guests to attend these events.

The first is the MEMORIAL MASS at St. Patrick's Cathedral at 9:00 A.M. with Francis Cardinal Spellman as Celebrant. Rt. Rev. Msgr. Donald A. McGowan, the National Moderator, will give the sermon. All Catholic nurses and hospital personnel in the New York metropolitan area will be invited to attend this Mass.

On Wednesday evening, June 28, we are planning a formal DINNER in the Grand Ballroom of the Hotel Commodore. His Eminence Francis Cardinal Spellman will preside. We have arranged for an outstanding speaker, Honorable John E. Fogarty, Congressional Representative from Rhode Island. Congressman Fogarty has been a member of the Appropriations Committee since 1947 and is chairman of the sub-committee providing funds for the Department of Health Education and Welfare. Mr. Fogarty has become nationally known as the spokesman for Medical Research in the Congress. Sometimes known as "Mr. Medicine" in the House, Congressman Fogarty will play a big role in the future of medicine in the present administration. He is an outstanding speaker and his address will be of great interest to all physicians.

No effort is being spared to make this evening an outstanding social event. The Reception begins at 6:30 p.m. with dinner at 8:00 p.m. Music will be provided by Stanley Melba and his orchestra. The price for the Banquet is \$20.00 per person. Those who attended the Silver Jubilee Dinner in 1957 will be pleased to know that the same banquet manager and staff will supervise the arrangements this year.

Those planning to be in New York during the AMA week, are urged to mark this date on their calendar — WEDNESDAY, June 28, 1961.

For Banquet tickets write to:

Martin J. Healy, M.D. Chairman, Century Dinner Committee 600 E. 233rd St. Bronx 66, New York

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